Problem G: Strange Calculator

Achilles: So good to run into you, Mr. T. I have a gift for you.

Tortoise: Oh, you shouldn't have. Besides, today is not my birthday. Unless this is an un–birthday present.

Achilles: I guess it is. It's nothing fancy, though. It is just this strange calculator that I bought. It has some unique limitations, so it's not very practical for doing advanced operations, but I think it could be of some value for someone who dabbles in discrete mathematics.

Tortoise: How nice of you to think of me, Achilles. But tell me, what are those "unique" limitations that you speak of?

Achilles: Well, for starters, it can only perform three operations: addition, subtraction and multiplication. You can input only natural numbers, and each number typed is limited to 15 digits maximum. Also, you can't type a complex expression with multiple operations in it. Operations are executed one at a time, at the earliest time possible...

Tortoise: ... wait, so it's like all operators have *left–precedence*...

Achilles: That's right. I'm aware that it might seem like a useless calculator, but it does have one redeeming quality. It always gives you the right answers without any loss of precision.

Tortoise: Is that so? Wow, then it does look like a very useful tool for certain things. Let's try it...

Write a program that simulates the behaviour of Achilles' strange calculator. More specifically: you receive a list of N natural numbers, separated by $N-1$ operators, which can be one of `+`, `-`, `*`. Calculate the answer after evaluating the $N-1$ operations, without any loss of precision. For this calculator, all operators have the same precedence and the operations are calculated left–to–right.

Input

Input starts with a positive integer **T**, that denotes the number of test cases. Each test case is described in two lines. The first line contains a single integer **N**, the number of natural numbers to operate over.

The second line contains the list of N numbers. Between all adjacent pairs of numbers there will be an operator, as described above. There will be a single space between numbers and operators. You may assume that all numbers given in the input will be non–negative integers with at most 15 digits. You can't, however, make those assumptions for the answer.

$T \leq 400$; $2 \leq N \leq 50$

Output

For each test case, print the case number, followed by the number that the answer given by the calculator.

Sample Input	Output for Sample Input
2 3 1 + 2 * 3 5 1234567890 * 9876543210 * 11111111 - 9999999 + 42	Case 1: 9 Case 2: 135480699881454397627385943